DETAILED ACTION

1.   This Office Action is responsive to the Preliminary Amendment filed on 6/12/06.

Accordingly, claims 1-13 are currently pending.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3.   Claims 1-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter.

        Claims 1-12 are rejected under 35 U.S.C. 101 as not failing within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101. must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing (Reference the May 15, 2008 memorandum issued by Deputy Commissioner for Patent Examining Policy, John J. Love, titled "Clarification of 'Process' under 35 U.S.C. 101"). The instant claim neither transform underlying subject matter *nor positively tie to another statutory category that accomplishes the claimed method steps*, and therefore do not qualify as a statutory process

        The specific link to the Processes memo is
http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/section_101_05_15_2008.pdf

        Claims 1-12 claim a method comprising steps "reading data signal samples...", "feeding the read data signal samples...", "determining timing error information...", "adjusting the sampling time..." and so on. These steps do not positively tie to another statutory category, e.g. an electronic device, an electronic components, etc., that accomplishes the steps. The claimed steps are of sufficient breadth that it would be reasonably interpreted as steps completely performed mentally, verbally or without machine.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5.   Claim 13 is rejected as failing to define the invention in the manner required by 35
U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or
operational language. The structure which goes to make up the device must be clearly and
positively specified. The structure must be organized and correlated in such a manner as to
present a complete operative device. Note the format of the claims in the patent(s) cited.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

7.   Claims 1, 8 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Tierno

(6,650,699).

-Regarding claim 1, Tierno discloses a method (see figure 2, col. 2, line 66 to col. 3, line

5, col. 3, line 62 to col. 6, line 66) of providing a timing/clock recovery, (considered here

equivalent with the limitation "threshold crossing timing recovery"), in an optical system (100),

which optical system is adapted to read data signal samples from an optical disc, said method

comprising:

procedure (102) of reading data signal samples (Vs) at a sampling time/clock (Clk) from

the optical disc by means (102) of the optical system (see col. 4, lines 19-24, col. 7, lines 43-65);

procedure (104, 106) of feeding the read data signal samples (Vs) to a timing/clock

recovery means (108, 110, 112), (considered here equivalent with the limitation "timing recovery

means") (see col. 7, lines 3-65);

procedure (108) of determining sampling phase/timing error ($d\psi_n$) comprising a multiplication of two variable values (P_n) and (E_n) by means of the timing recovery means, (either one (P_n) and (E_n) and the multiplication of (P_n) and (E_n) considered here equivalent with the limitation "timing error information") (see col. 6, line 61 to col. 7, line 23);

procedure (112, 110) of adjusting the sampling time/clock towards synchronous timing instants on the basis of the timing error information (see col. 7, lines 34-65),

wherein the method further comprises a step (comprising (210)) of multiplying the timing error information by a weighing function (comprising (d/M^2)) in succession of procedures of determining the timing error information and before the step of adjusting the sampling time towards the synchronous timing instants (see col. 7, lines 3-65).

-Regarding claim 8, as applied to claim 1, Tierno teaches that the timing recovery is a timing recovery, (considered here equivalent with the limitation "zero crossing timing recovery").

-Regarding claim 13, as applied to claim 1 set forth above and herein incorporated, Tierno teaches an optical system (see figure 2) for reading data stored on high capacity optical disc "optical disk (CD-ROM)", characterized in that the optical system performs the method (see col. 2, line 66 to col. 3, line 2).

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.   Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tierno in view of the prior art admitted by the applicant, (hereafter referred as "the admitted prior art").

        -Regarding claims 2 and 7, as applied to claim 1, Tierno teaches the timing recovery means is adapted to provide timing recovery to data signal samples.

        Tierno does not teaches that data signal samples are coded in binary modulation, (as claimed in claim 2), or in RLL coding (as claimed in claim 7).

        In Tierno, the data signal samples are inherently coded signal so that they are decoded by (106) for their data recovery (see figure 2).

        Coding data in binary modulation, e.g., in RLL coding, is well-known in the art as one among alternatives for coding data. For instance, the admitted prior art teaches that data can be coded in RLL coding (see specification, page 1, lines 10-23, of the instant application).

        Since Tierno does not teach, in-specific, how the data signal samples are coded, it would have been obvious for one skilled in the art to implement or alternatively implement Tierno in such a way that that data signal samples are RLL coded data, being coded in RLL, so that the data signal samples would be obtained as required and expected.

Conclusion

        Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (8:00 AM - 4:30 PM).

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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